



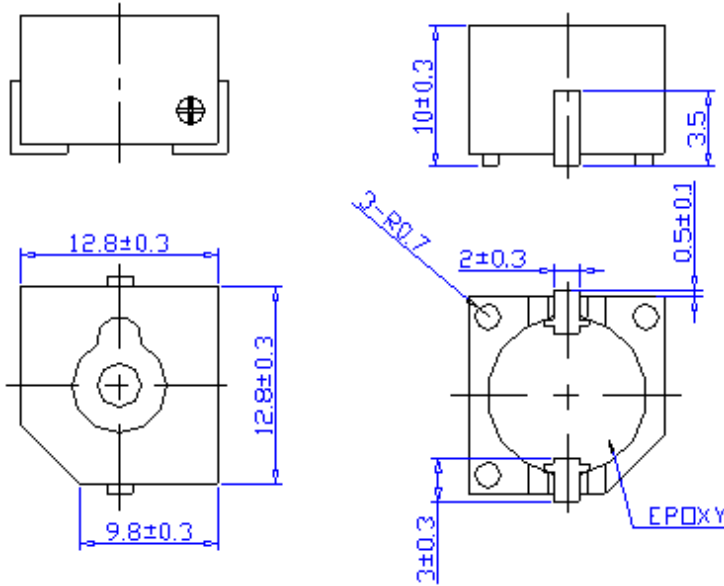
PRODUCT INFORMATION

PART #	CEEB128N103-407C2400NLR				Revision: 0-2017	
	SMD Electro-Magnetic Buzzer					
DESCRIPTION			FEATURES			
<p>Challenge Electronics Electro-Magnetic Buzzer, 12.8 mm Long, 12.8 mm Wide, N type SMD case, 10.3 mm Height, 4 to 7 Vo-p operation, Continuous Tone, 2400 ±300 Hz Resonant Frequency, with a Typical Sound Pressure output of 90 dB(A) at: 10 cm, Rated Voltage. N type SMD Termination, Washing Label, RoHS Lead Free compliant</p>			<ul style="list-style-type: none"> ● Flame Retardant Plastic ● RoHS, Lead Free Compliant ● ISO 9001 			
SPECIFICATIONS						
Sound Type	Continuous Tone	Operating Voltage	4-7 Vdc	Rated Voltage	5 Vdc	
Sound Pressure Level	Min. 90 dB(A), at Rated Voltage, 10 cm, 25 °C					
Operating Current	Max. 30 mA, at Rated Voltage, 25 °C					
Resonant Frequency	2400 ±300 Hz.	Operating Temperature	-30°C to +85°C	Storage Temperature	-40°C to +90°C	
Material	Case	Plastic, PPS, Gray				
	Diaphragm	Ni Alloy	Disc	N50		
	Termination	SMD, 2 soldering pins, Sn plated Brass				
Physical Dimensions	Length or Diameter (L /D)	12.8 mm	Width (W)	12.8 mm	Height (H)	10.3 mm
Approximate Weight	2.0 grams	Removable Washing Label	Yes	Compliance	RoHS, Lead Free	
RELIABILITY						
Thermal Operating Temperature Test	96 hours continuous operation at Rated Voltage , at Maximum Rated Operating Temperature *					
	96 hours continuous operation at Rated Voltage , at Minimum Rated Operating Temperature *					
Thermal Storage Temperature Test	96 hours storage at Maximum Rated Storage Temperatures *					
	96 hours storage at Minimum Rated Storage Temperatures *					
Thermal Shock Test	5 cycles of Minimum and Maximum Operating Temperature, Each cycle shall be set per diagram and is 3 hours long *					
Humidity Test	96 Hours at +40°C±2°C. 90-95% RH *					
Insulation Test	A minimum of 10 MΩ, measured with 100 Vdc Insulation Resistance Meter, between the Electrical Terminals and the Transducer Case					
Vibration Test	2 Hours of at 0.75 mm with 10 to 55 Hz. vibration frequency to each of 3 perpendicular directions *					
Termination Strength	Maximum of 9.8 N (1.0 Kg) load pull test, applied to each terminal in axial direction for 10 seconds					
Drop Test	Dropped naturally from 750 mm height onto the surface of 40 mm wooden board, 3 axes (X,Y,Z) directions, 3 times (6 times total) *					
Solderability	Terminal leads are immersed in rosin for 5 seconds and then immersed in solder-bath of +270°C for 3±1 seconds					
Soldering Heat Resistance	Terminal leads are immersed, up to 1.5 mm from part case, in rosin for 5 seconds and then immersed in solder-bath of +350±5°C for 3±0.5 seconds or +260±5°C for 10±1 seconds					
* Reliability Test Performance	Parts should conform to original performance within ±3dB, after 3 hours of recovery period					
Life Test	Intermittent	96 hours of a 1 minute on 4 minutes off cycle at room temperature and maximum rated voltage				
	Continuous	96 hours continuous operation at maximum rated Voltage and maximum Operating Temperatures				
Warranty	For a period of one (1) year from date of shipping under normal operations conditions This warranty does not apply to products damaged through misuse, abuse, improper installation, alteration, rework, or attempt to repair					

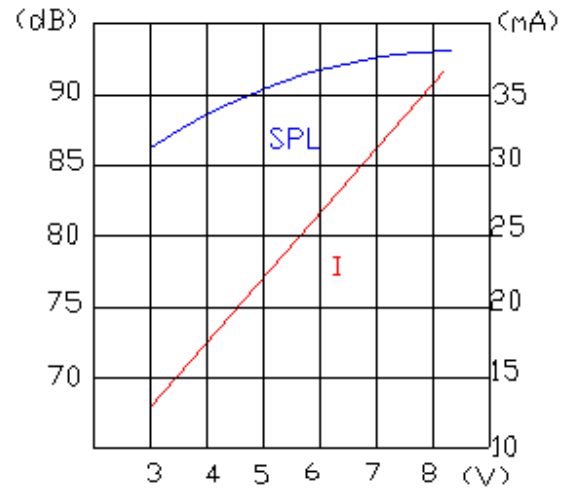


DIMENSIONS

Units in: mm, Tolerance: ± 0.5 mm unless specified otherwise.



SPL vs. FREQUENCY RESPONSE



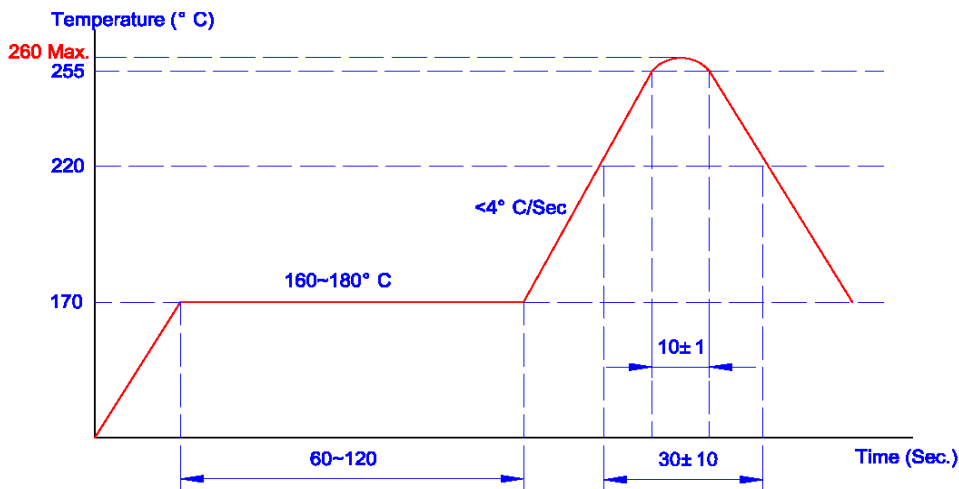
RECOMMENDED LAND PATTERN

N/A

STORAGE

- Shelf life:** Twelve (12) months when devices are to be stored in factory supplied unopened ESD moisture sensitive bag under maximum environmental conditions of 30°C, 70% R.H.
- Exposure:** Devices should not be exposed to high humidity high temperature environment. MSL (moisture sensitivity level) Class 2

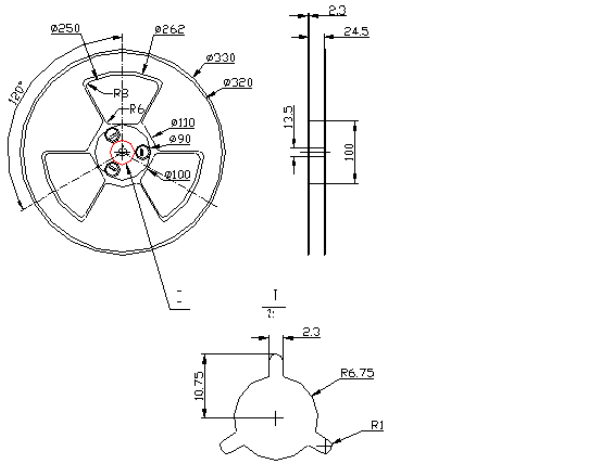
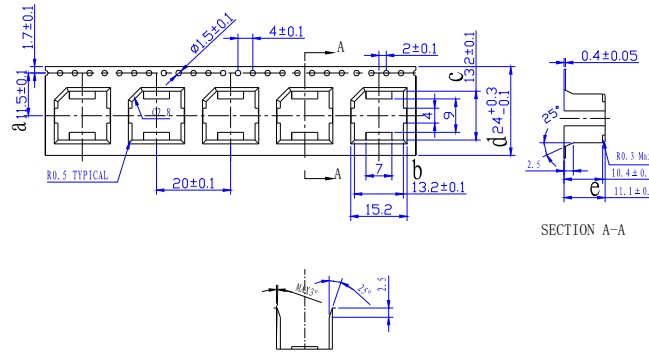
SOLDER REFLOW PROFILE per IPC/JEDEC J-STD-020D



Stage	Temperature Profile	Maximum Time
Pre-heat	170~230°C	120 sec
Solder Melt	Above 230°C	100 sec
Peak	260°C Maximum	
Cool Down		100 sec
Total Duration Period		6 Minutes Maximum



TAPE & REEL DIMENSIONS (Unit: mm)



1. 10 pocket holes pitch cumulative tolerance ± 0.20 mm.
2. Carrier camber is 1 mm in 100 mm.
3. A0 and B0 measured on a plane on a place 0.30 mm above the bottom of the pocket.
4. K0 measured from a plane on the inside bottom of the pocket to the top surface of the carrier.
5. All dimensions meet EIA-481-2-A requirements.
6. Reel Size 13"
7. Parts per Reel 320 parts

SHIPPING

Package Options	Quantity per package	Total Shipping Quantity
Tube	50 PCS x 8 tubes	4000
Reel	320 PCS x 10 reels	3200

Revision	Description	By	Date